



Recycling & China

Why do China's policies matter?



- Lots of stuff headed to China...
- Paper
 - Over 40% recovered paper exported
 - About 25% of exported paper goes to China
 - 70% of mixed paper exported
- Plastics
 - Over 20% of bottles exported
 - About 33% of non-bottle rigid plastics exported



Why do China's policies matter? Con'd....



- Global issue – EU, Canada, Japan all experience restrictions
- Without a buyer, it's not recycling...



Is this temporary?

- Previous market volatility:
 - Early 90's, late 90's, 2008, 2013...
- Chinese mills
- U.S. fiber quality
- 0.5% standard enforcement??



KEEP
CALM
IT'S
JUST
TEMPORARY

Or is it the new normal...



- Fewer licenses anticipated
 - Smaller mills with <300k tons capacity
 - 2018 licenses still pending
- Quality standards expected to be high
- Post-consumer plastics...



Impacts of these policies – Higher costs



- Operations - MRFs focused on making a marketable product
 - Slower lines
 - Additional sorters – labor availability
 - CCIC inspectors
- Capital - Potential investment in new equipment
 - Requires more capital to maintain existing revenues
 - New facilities (mills, plastic cleanup – pellet, washed flake)
 - But what if China changes its mind?

Impacts of these policies con'd



- Lower revenues
 - Fluctuating commodity prices
- MRFs challenges
 - Slower lines reduces throughput capacity
 - Some MRFs have to turn away trucks
 - Soft markets affecting commodities
 - Mixed paper
 - 1's, 2's & 5's instead of 1-7 plastic

Impacts of these policies con'd



- Concern about materials movement
 - Bookings are smaller
 - 6 week transit
 - Potential rejection?
 - Historical sales channels drying up
 - Warehousing material
- Impacts vary by region and by end markets
 - West and east coast



Industry commitment to recycling



- Compliance with more stringent specifications
 - May require upgrades to MRFs and limits to what is collected
 - Focus on core materials vs. non-core materials
- Not a good time to add new materials to programs
 - Additional materials increase likelihood of contamination
- MRF upgrades may require higher processing fees

What can be done?



- Focus on Quality
- Create demand
- Prepare for higher costs to recycle
- Develop durable contracts



Garbage in, garbage out.

(Proverb)

Focus on quality!

- Eventual relaxation of restrictions are predicted
- Higher quality standards will be the norm
- Communicate the importance of generating a marketable commodity!
- Reduce contamination
 - Enforcement

**Quality means
doing it right
when no one is
looking.**

Henry Ford



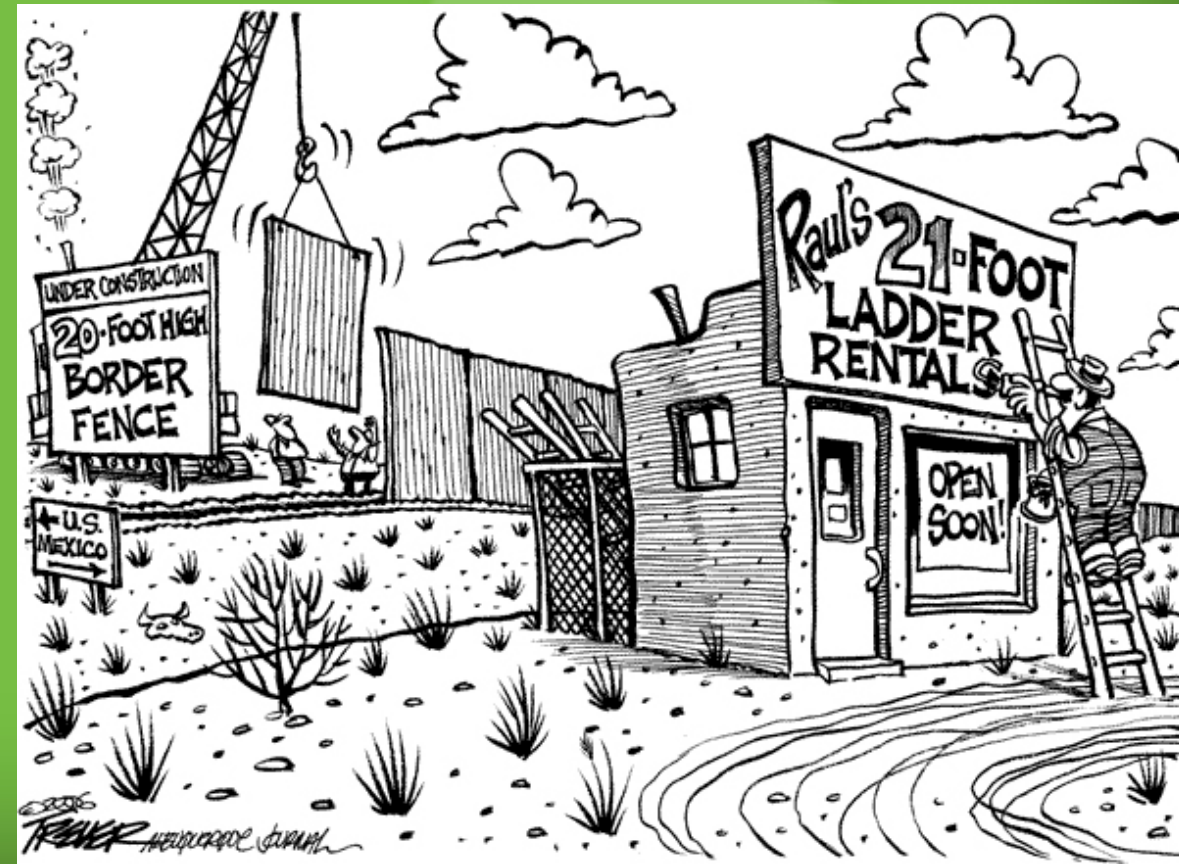
*...is everyone's
responsibility.*

(Deming, W. E.)

Law of Supply & Demand



- Create demand for recyclables materials
- Support development of alternative markets outside of China:
 - Domestic outlets
 - Other Asian markets (Vietnam, India, South Korea)
- Alternative markets will develop but not at the timelines of these new policies



Anticipate higher costs



- Investment in quality requires:
 - Investment in education – should be ongoing
 - Processing – facility upgrades
- Complying with new standards may require upgrades to MRFs
- MRF upgrades will likely require higher processing fees



Recycling contracts



- Joint advisory on recycling
 - Understanding material composition
 - Method for determining value for recyclables





THANK YOU!

Anne Germain, P.E., BCEE
agermain@wasterecycling.org